REMARKS/ARGUMENTS

Claims 1 and 12 are amended by this response. Claims 2 and 13 are canceled. Accordingly, claims 1, 3-12, and 14-20 remain pending in this application.

In the latest office action, the Examiner objected to the specification for purportedly failing to provide support for the claimed subject matter. This objection to the specification is traversed as follows.

Specifically, the Examiner objected to the specification for failing to provide description of a "control wheel". In response, the Examiner's attention is respectfully drawn to the following passages taken directly from the specification, which specifically name a control "wheel":

> Application of a multiplier to govern train velocity can occur over a range of control wheel rotation speeds. For example, in accordance with one embodiment of the present invention, rotation of the wheel at speeds corresponding to one full rotation in greater than 200 ms could result in a multiplication factor of one. (¶**[0045]**; Emphasis added)
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> * * *
>
> Utilizing the former speed factor of four, a wheel conventionally generating fifty edges per revolution could output one hundred speed step changes within a wheel rotational arc of only 180°, or two hundred speed step changes within a wheel rotational arc of 360°. (¶**[0047]**; Emphasis added)
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> * * *
>
> Alternative embodiments in accordance with the present invention could utilize other ways of generating electrical pulses based upon rotation of a control wheel knob. (¶**[0050]**; Emphasis added)

These paragraphs, all present in the specification as originally filed, provide ample support for the claim term "control wheel". Continued objection to the specification is therefore improper, and this objection should be withdrawn by the Examiner

The claims stand rejected as obvious under 35 U.S.C. §103(a) in view of one or more references cited by the Examiner. As a threshold matter, the Examiner is respectfully reminded that in order to establish a prima facie case of obviousness, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP 2142. Here, however, the reference combinations relied upon by the Examiner fail to teach, or even suggest, all of the elements of the pending claims.

For example, claims 1-11 stand rejected under 35 U.S.C. §103(a) as obvious in view of U.S. Patent. No. 6,179,105 to Haass ("the Haass Patent"), taken either alone or in combination with the CUI reference. These claim rejections are overcome as follows.

Embodiments in accordance with the present invention relate to methods and apparatuses wherein a user can rotate a knob or wheel to regulate velocity of a model vehicle such as a model train:

> Initially, a user can rapidly rotate the knob to attain coarse control over a wide range of velocities, and then rotate the knob more slowly to achieve fine-grained control over the coarse velocity. Utilizing the control scheme in accordance with embodiments of the present invention, in a compact and uninterrupted physical motion, a user can thus rapidly exercise both coarse and fine control over velocity of a model train. (Emphasis added; **¶[0014]**)

Pending independent claim 1 accordingly recites a method for controlling velocity wherein power provided to a model vehicle is correlated with a speed of wheel rotation:

> 1. A method for controlling velocity of a model vehicle, the method comprising:
> providing a control wheel configured to rotate within a range of positions;
> determining a speed of rotation of the control wheel by a user over a period of about 50 milliseconds or less;
> correlating the magnitude of power provided to the model vehicle with a speed of rotation of the wheel by multiplying a distance of rotation of the wheel by a factor determined from a time of wheel rotation. (Emphasis added)

The Haass Patent relied upon by the Examiner fails to teach or even suggest each and every element of the pending claims. First, the Haass Patent fails to teach determining a speed of rotation of a wheel as is recited by the pending claims. Specifically, as shown and described in connection with FIG. 1 of the Haass Patent, that reference teaches only a rotor element (18) whose rotation is responsible for driving the wheel set of a motor vehicle via a driving connection (19). (See col. 4, lines 9-16). Thus in the Haass Patent, rotation of the rotor directly drives movement of the model vehicle, rather than its speed of rotation being detected to control velocity of the model vehicle. The Haass Patent thus does not teach or even suggest a step of determining a speed of rotation of the wheel in the manner of the pending claims.

Moreover, the Haass Patent also fails to teach a control wheel that is rotatable by a user, as is recited by claim 1: "determining a speed of rotation of the control wheel by a user"

(Emphasis added). Specifically, the Haass Patent plainly shows rotor (18) as being an internal element of the motor used to cause movement of model vehicle (2). The location of the rotor deep inside the model vehicle renders it inaccessible to the user for rotation in order to control movement of the model locomotive.

Based upon the failure of the Haass Patent to teach or even suggest at the two above-recited elements of the claims, the claims cannot legitimately be considered obvious in view of this reference. Continued reliance upon the Haass Patent as the sole basis for obviousness is clearly improper here, and these claim rejections should be withdrawn.

In recognition of the complete lack of teaching in the Haass Patent regarding a wheel rotatable by a user, the Examiner has also combined the Haass Patent with the CUI reference to provide a separate ground for the obviousness of claims 1-11. However, even in combination with the CUI reference, the Haass Patent fails to teach or suggest all of the elements of these claims.

Specifically, while the Haass Patent does illustrate an "encoder", the Haass Patent provides virtually no teaching regarding the operation or function of this encoder device. (See col. 3, lines 36-44). And while the CUI reference does describe an encoder device, in no sense can the Haas Patent or the CUI reference be understood to teach "correlating the magnitude of power provided to the model vehicle with a speed of rotation of the wheel by multiplying a distance of rotation of the wheel by a factor determined from a time of wheel rotation", as is recited by currently pending claims 1-11.

In view of the failure of the Haass Patent, taken alone or in combination with the CUI reference, to teach or even suggest each and every element of the pending claims, it is respectfully asserted that claims 1-11 cannot be considered obvious in light of those references. Continued maintenance of these obviousness rejections in improper, and the claim rejections should be withdrawn.

The Examiner has further relied upon a second set of references to additionally reject all of the pending claims as obvious. Specifically, claims 1-20 stand rejected as obvious under 35 U.S.C. §103(a) based upon U.S. Patent. No. 5,749,547 to Young et al. ("the Young Patent"),

considered in combination with U.S. Patent No. 5,956,558 to Rosenberg et al. ("the Rosenberg Patent"). These claim rejections are overcome as follows.

As conceded by the Examiner, while the Young Patent fails does disclose a system for controlling a model vehicle (locomotive), the Young Patent fails to teach or even suggest correlating velocity of the vehicle to a speed of rotation of a control knob or wheel. Accordingly, the Examiner has turned to the Rosenberg Patent to provide this teaching.

The Rosenberg Patent, however, fails to provide the teaching that is missing from the Young Patent. In particular, the excerpt cited by the Examiner describes the correlation between functionality (i.e. vehicle velocity) and the absolute position if a control wheel, rather than rate of rotation of the control wheel:

> Isometric mode (or "pressure" mode) is a rate control mode for wheel **16**. The distance of the wheel from a particular position controls a rate of a computer function, such as the rate of scrolling, zooming or panning, the rate of fast-forwarding/rewinding a computer-displayed movie, the rate of travel of a simulated vehicle . . . a user might program three favored speed settings for the wheel in isometric mode, where the settings are indicated as force detents when the wheel is rotated to those speed settings, thereby assisting the user in finding and maintaining the wheel at those settings. (Emphasis added; col. 21, lines 44-65)

There is absolutely no teaching or suggestion in the Rosenberg Patent to control velocity of a model vehicle based upon a speed of rotation of a control knob or wheel, as described in the instant application. Accordingly, the pending claims cannot be considered obvious in view of this second combination of references relied upon by the Examiner.

Finally, the Examiner has also rejected pending claims 1-17 as obvious based upon the Procab manual reference. These claim rejections are overcome as follows.

In the preliminary amendment of the instant application mailed April 11, 2005, co-inventor Mr. Lou Kovach submitted a declaration under 37 CFR 1.132 describing the operation of the Procab device. In particular, this declaration clearly demonstrated that the Procab device was not configured for effective operation over time intervals of 50 milliseconds or less. Moreover, nowhere does the Procab manual reference teach or even suggest the desirability of sensing user inputs over a period of 50 milliseconds or less.

Because the Examiner has relied solely on the Procab manual to reject the pending claims, and because the Examiner has failed to provide any teaching or suggestion for operation within the 50 millisecond or less regime recited by the claims, these claims cannot reasonably be considered obvious in view of the Procab manual reference. Continued maintenance of the obviousness claim rejections is clearly improper, and these claim rejections should be withdrawn.

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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